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ABSTRACT

Handicapped and non-handicapped preschool children were observed in order to study the impact of mainstreaming on the preschool handicapped child. Ten observational records were collected on each of 24 non-handicapped and four physically handicapped children in three mainstreamed classrooms. Twelve physically handicapped children in two specialized settings were also observed. The resulting 400 observational records served as a data base for the development of a coding system and for reliability checks on the observational procedures. Coding categories focused on (a) the source of the child's actions, (b) the direction of the child's behavior, (c) the sensory modalities the child used, and (d) the quality of the child's social interactions. Observer reliability was 86% with a range from 66 to 96 percent. Inter-coder reliability was 80% and ranged from 60 to 94 percent. Results indicate that on three dimensions the social interactions of handicapped children in mainstreamed and special settings did not differ significantly. Normal children in mainstreamed classes interacted significantly more often and had more sustained reciprocal interaction than did mainstreamed handicapped children. Mainstreamed handicapped children interacted with materials significantly more than handicapped children in special classes but the children in special settings had significantly more interactions indicating completion and extension of the materials. The benefits of mainstreaming for the preschool handicapped child are questioned on the basis of these findings. (Author/RH)

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PILOT STUDY OF THE EFFICACY OF MAINSTREAMING-INTEGRATION

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PILOT STUDY OF THE EFFICACY OF MAINSTREAMING-INTEGRATION

INTRODUCTION

The current focus on "mainstreaming" of handicapped children, at least partially related to the implementation of Public Law 94-142, has raised many issues which need to be addressed by professionals who have had experience in the design and delivery of sound, quality service and therapeutic programs to the wide range of multi-handicapped young children we see today.

We, in a sense, have been daily exposed to the realities of this population. I must define "we". We, in this case, describes our department at IRM, NYU Medical Center - the department of Preschool and Infant Developmental Programs and Research. We have long been exposed to the actual children and their families. We have learned from them the multi-dimensional and profound nature of their diversified problems, as well as their diversified needs - emotionally, socially, physically and intellectually. Developmentally, we look at their levels in all areas of functioning where each level/position can be regarded as a point on a continuum and, the locus of the points delineate unique profiles of educational status and need.

Administrators, legislators and, even too often (I'm sorry to say), university training faculty are too far removed from the "live people" we know so intimately - the young multi-handicapped children and their families who are the real consumers of mandated educational practices. Too few research studies have been undertaken, using naturalistic observational data (rather than checklists or questionnaires) to examine the interactive behaviors of handicapped children - alone with

educational materials and, in particular (when mainstreamed) the quantity and quality of their interactions with their non-handicapped peers in the school settings. These types of studies are needed to evaluate and better understand the short and long-term implications of current legislative mandates and current educational trends such as "mainstreaming".

Too few (in the child care profession) have even questioned this vogue in education for the handicapped that is often so ardently espoused under the guise of "equal rights for all children". They have interpreted as an "equal right" - the right of all children to be integrated in "normal" school settings, independent of race, color, creed, and, now, we add - independent of developmental disorders - severity of pathology or degree of handicapping condition. This new definition of "integration" - as a "right" directly related to one type of educational referral must be examined more carefully. I am in no way recommending a curtailment or reduction in the "rights" of handicapped children to "equal" educational opportunities. I am recommending that this educational equality may best be achieved, in some cases, by referrals and placements in segregated (special) settings rather than in integrated (normal) settings.

The new legislation and commitment to "mainstreaming" as the right of every handicapped child to equal educational programs, is a "right", that has been, I suggest, somewhat distorted. It has been distorted, in many instances "innocently" and, in other instances, I would say "less innocently".

The right of all handicapped children to be integrated into settings originally designed and staffed for normal children is being implemented without the necessary, previous knowledge and experience that is required to identify, to assess, and to prescribe individualized curricular goals

(short and long-term). Lacking too, is the experience to evaluate relevant attitudinal information related to the family's expectations and attitudes toward their child's academic achievements, as well as the varied cultural backgrounds of each child and his/her family. All of these factors must be sensitively considered before any sound educational referral can be made - either to 1) a special setting - a segregated setting, or to 2) a normal setting - an integrated setting (where a handicapped child is "mainstreamed" with normal peers).

I suggest that many of these referrals are implemented too hastily - 1) without sufficient analyses of and respect for the feelings of the parents of the handicapped child, and 2) without sufficient exploration related to the feelings, the competencies, and the acceptance of the educational staffs who will be directly involved with the handicapped children and their families in the receiving educational facility. Too often it is assessed (usually by people who are not involved in day-to-day contact with these parents) that "mainstreaming" is equated with "good" and education offered in a segregated setting is equated with "bad". This comparison is somewhat similar to Escalona's statement years ago in her book Prediction and Outcome (Escalona & Heider, 1960) when she originally assessed "institutionalization as bad, as noxious, and home as good." As she became more involved with homes and institutions, she corrected her original view and, in Roots of Individuality (Escalona, 1968) she stated that she no longer believed in these equations, "you cannot generalize". Home can be bad. A therapeutic milieu in an institution can be very good, indeed.

Similarly, I suggest that there are times when segregation can be considered "good" and integration can be considered "bad". Many parents

of the handicapped children, in our programs, with whom we have had and with whom we have maintained a close relationship, have told us that they preferred the more insulated settings and segregated classroom as compared to the normal setting, for their handicapped children. There are virtues to very small classes and very experienced staff with support from inter-disciplinary teams. Many of the parents of "normal" children have embraced the concept of mainstreaming. However, when the concept was applied to their particular school - to the particular classroom of their "normal" child, they began to raise questions* as to the degree of handicap and the implications of having a particular type of handicapped child in a normal classroom. Questions related to "what would it take away from the education of my child", were raised frequently. This is a real and valid question for parents. Children without problems in development have but one educational life just as children with developmental dissonance and dysfunction do.

We should be concerned with selecting, designing and referring children to educational programs to nurture the optimal development of both populations of children. However, the current unprecedented concentration on integration of handicapped children, I suggest, is based on other factors - other than altruistic and democratic thinking. I and others believe that the rationale for the practice of "mainstreaming" is at least partially based on political, legal and, above all, on financial considerations. The fiscal problems in educational systems are real and, educating handicapped children in "special settings" is expensive! Referring these children to "normal settings" is a realistic solution to a financial problem shared by most educational facilities. It is a way of providing services for handicapped children without

*Pilot Study

incurring or increasing fiscal strain on already over-strained educational budgets. However, is it the optimal education plan for each handicapped young child?

- Does it give the child the learning experiences to which she/he has the right?
- What does happen when a young multi-handicapped child is mainstreamed?
- Is his/her development best nurtured in this type of setting?
- What specific areas of development are most critical to examine as measures and descriptors of function or dysfunction?
- How have parents of both normal and handicapped children reacted to the concept and/or practice of mainstreaming?
- How have the staffs of "normal" educational settings reacted when they have had to respond to both the mandate and the implementation of mainstreaming?

These are but a few of the questions which are raised and discussed continuously by many of us who have long been involved in the delivery of educational and therapeutic services to handicapped children.

In our presentation today, we will attempt to share with you some findings from our pilot investigation (Note 1) which addresses some of the questions I just raised related to mainstreaming. Material related to the children, their families and the staffs of participation education centers (segregated, integrated, and "all normal" education settings) is available for those persons who are interested in all of the data generated and analyzed in this pilot study (Note 2 and 3). The current presentation, however, will concentrate on the portion of our study related to the children - the primary subjects of this pilot investigation.

METHODOLOGY:

To study the impact of mainstreaming on the preschool handicapped child one cannot rely upon conventional measures of testing or assessment of academic performance or conventional methods of measuring the impact of socialization - questionnaires on attitude change. For the study of these factors in the young child, normal and/or handicapped, one must observe the child's interactions with materials and with peers. (Wynne et al. 1975).

Observational records - detailed sequential narratives of the child's interactions with peers, teachers and educational materials were therefore selected for our use as our primary source of data.

Insert Item 1: Sample observation of a handicapped child in a mainstreamed setting (Pg.23 Appended)

This excerpt demonstrates the nature of these observations. As you will notice, the focus was both on social interactions such as in Unit #9 (Item 1) "Joseph is sitting on a chair, smiling at her; she's smiling back" but also on behavior which indicated the child's competence with educational materials. For example, In Unit #8 (Item 1) we see this handicapped child's ability to engage in symbolic play "He gets up and walks to the toy stove where he picks up a toy vegetable from the top of the stove and pretends to be eating it."

Records such as this were collected on 40 children in the first year of the study.

Insert Table 1: Demographic Data Year I (Pg.24 Appended)

Ten observational records were collected over a five month period on each of the 24 non-handicapped children in 3 mainstreamed classrooms and 4 physically handicapped children in these mainstreamed classrooms. Twelve physically handicapped children in 2 specialized settings were also observed. These

400 observational records served as a data base for: 1) the establishment of the reliability of the observational procedures and 2) for the development of a coding system.

The Coding System:

Observational records were reviewed and the coding system was designed based upon the following criteria: a) That it should identify the behaviors of handicapped and normal children ranging chronologically from 2 years 10 months to 6 years 4 months and developmentally from 12 months to over 6 years old, and; b) That it should be sensitive enough to capture the subtle qualitiative differences of social interactions and interactions with materials.

Each interaction of the child with a material or an individual, each unit of behavior, was examined and categories of behavior were identified which answered the following questions:

1. What was the SOURCE of the child's actions? What caused a particular behavior to occur? Was it initiated by the child or elicited by another?
2. What was the DIRECTION of the behavior? To whom or to what was the child directing his/her reactions or actions?
3. What MODE did the child use? What were the primary sensory modalities used by the child in interacting with others or with materials? Were these interactions verbal, non-verbal, tactile or visual?
4. What was the QUALITY of the child's social interactions? What were the levels of INTENSITY, how involved or interested was the child in social interactions with peers and adults? Were the children and teachers responsive to the child's social overtures, were the child's initiatives reciprocated?

5. What was the QUALITY of the child's interaction with materials? What was his/her level of INTENSITY and USE? How involved was the child with educational activities and materials? How effectively did the child use materials? Was the child's use appropriate for the material or task?

Using these guidelines, the final coding system, focusing on the 4 major domains of each interactional unit 1) SOURCE; 2) DIRECTION; 3) MODE; and 4) QUALITY, emerged into an expanded coding system. This system was considered refined when coding in each of the categories had consistently reached a minimum of 60% agreement across coders.

Insert Item 2: Outline of coding system (Pg.25 Appended)

The sample coded observation demonstrates the use and application of the system (p.27 Appended).

Reliability and Validity of the System

Inter-observer reliability and the validity of the system of coding was based upon observations secured in the second year of the study. This sample was selected from: a) One specialized setting for only physically handicapped children: b) Five preschool mainstreamed settings; one classroom had 2 physically handicapped children; 4 classrooms had only one physically handicapped child in each room; and c) A normal classroom which did not contain any children with observable physical handicapping conditions. From among these classrooms four groups of children comprised the sample used for the establishment of instrument reliability and validity:

1) A group of Handicapped Children in a specialized setting, 9 children (SPEC);
2) A group consisting of the six children who were mainstreamed into five preschool settings (MAIN);

3) A group of 10 non-handicapped children, 2 from each of the five mainstreamed classrooms into which the handicapped children were integrated (NI);

4) A group of 9 non-handicapped children from a classroom in which no handicapped children were mainstreamed (NORM).

Insert Table II: Demographic Data Year II about here (pg.28 Appended)

Observer reliability - the extent to which two observers record the same behavior, was 86% with a range from 66 to 96%.

The Inter-coder reliability, the percent of agreement between coders in each of the 4 major dimensions, was 80% and ranged from 60%- 94%.

The validity of the system - its ability to differentiate handicapped from non-handicapped children on the basis of functioning in the various categories was established as follows: Children were observed from amongst the 7 classrooms outlined above during two data collection periods, with a 3 month interval in-between. Six 5-minute observations were collected on each child during each of the two Data Collection periods. At the completion of each period of data collection, observations were transcribed, corrected for clarification, and coded.

The procedures for data analysis were as follows: 1) For each child the numbers of behavior in each of the categories of a given dimension were tallied. 2) The proportion in each category to the total number of units of interactions were then computed. 3) For each group the most frequently occurring categories within each dimension were more carefully examined using the Krushal Wallis - One Way Analysis of Variance. 4) Comparisons between groups were made using the Mann Whitney U Test (all significant at $P < .05$).

In Data Collection Period I, there were a total of 36 significant differences between the 4 groups, of which 30 differentiated handicapped from non-handicapped.

In the second period of data collection there were 44 significant differences between the 4 groups, 28 were between the groups of handicapped as opposed to groups of normal children. The analyses of the data from both data collection periods confirmed that the coding system was valid in that it differentiated handicapped from non-handicapped children.

RESULTS OF PILOT STUDY OF MAINSTREAMING:

The major question which we wished to examine in terms of the impact of mainstreaming was: What were the differences in the experience of handicapped children in specialized as opposed to in integrated mainstreaming settings? Specifically: What changes do you see in handicapped children during the course of the year in the specialized or mainstreamed classrooms? How does the type and quality of interaction of handicapped children compare with that of the normal children in mainstreamed settings? Finally, what are the differences for the handicapped child of placement in special versus "integrated mainstreamed" settings, in terms of social interactions and the child's abilities with educational materials?

In order to address these issues, the results will focus upon three groups of children:

1) Handicapped children in a SPECIAL setting for the Handicapped (SPEC).
2) Handicapped children mainstreamed into classrooms for normal children (MAIN).
3) A subset of 10 normal children in mainstreamed classrooms matched demographically to the handicapped children integrated into classrooms (NI).

To answer the questions raised above we will specifically examine the

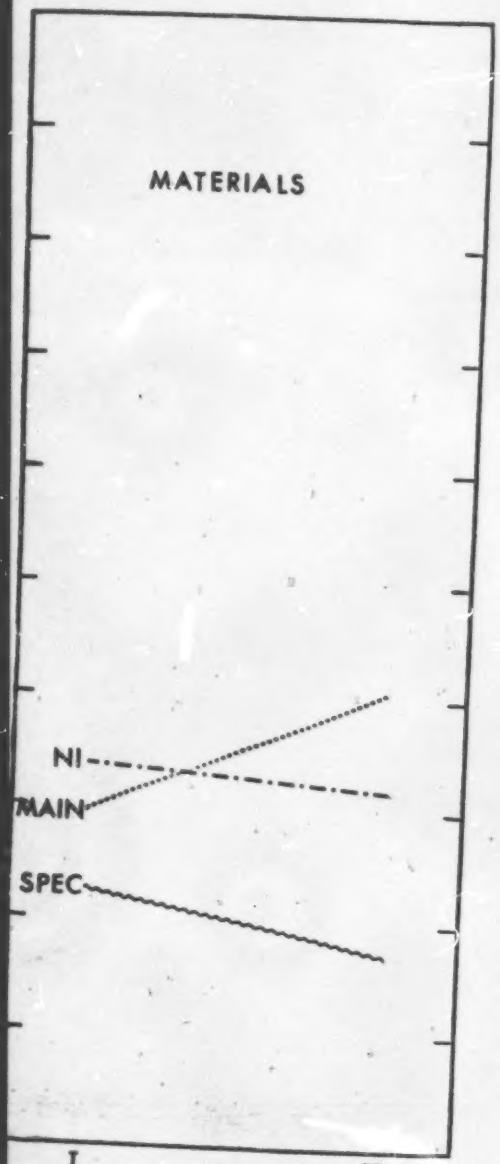
domains of DIRECTION - the relative frequency of interactions with peers, teachers, and materials, and the domain of QUALITY - Social Intensity, Social Reciprocity, Materials Intensity and Materials Use, focusing on both overall functioning during the course of the year and comparisons between groups at the end of the year.

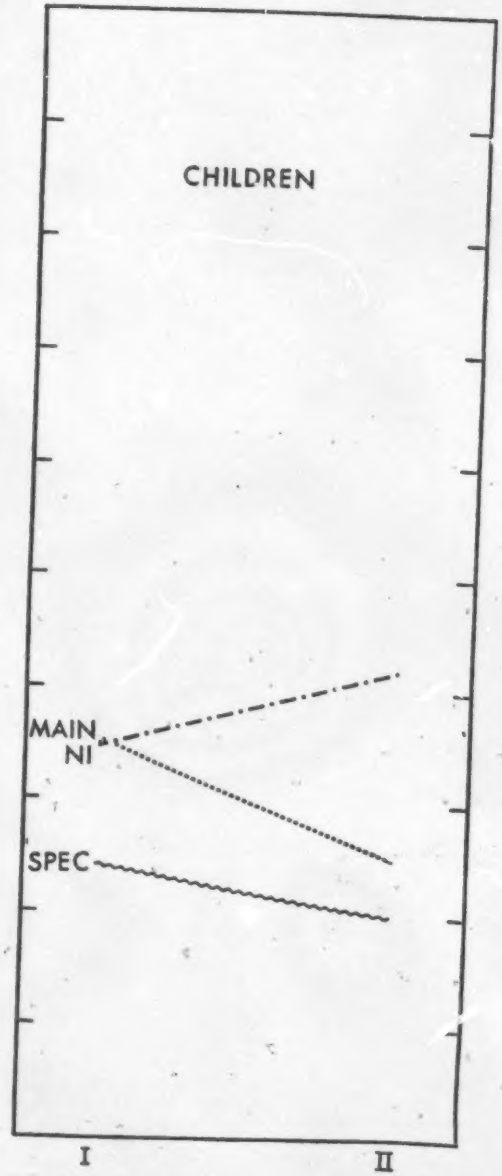
Insert Figure I: DIRECTION here p. 12

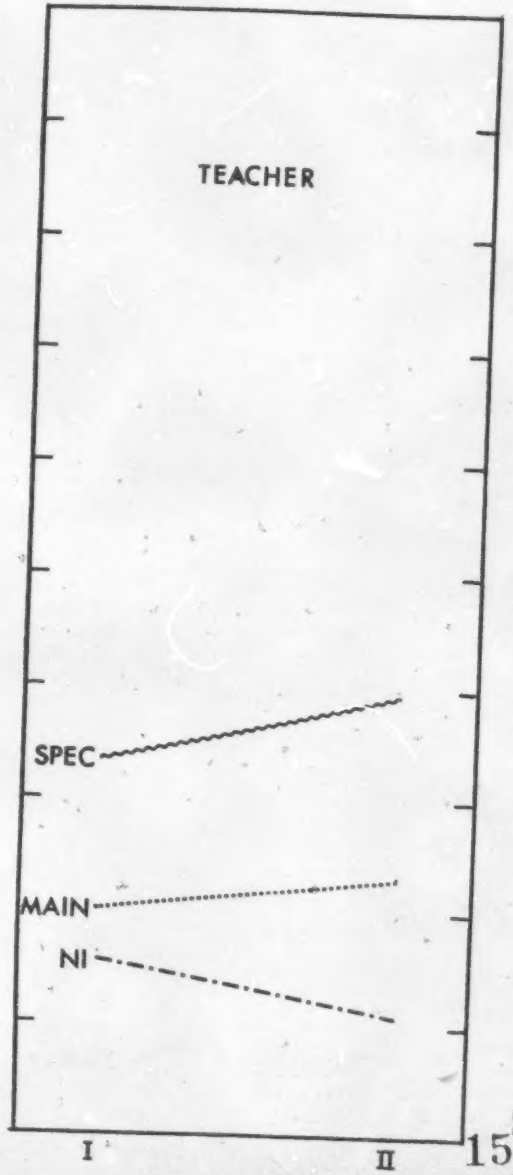
In the dimension of DIRECTION we see the frequency of interactions directed toward EDUCATIONAL MATERIALS, CHILDREN, AND TEACHERS. The handicapped children who were mainstreamed significantly increased the proportion of their interactions with materials relative to their non-handicapped peers (NI). Focusing on performance at the end of the year, comparisons at Data Collection II, we find that the mainstreamed handicapped group interacted significantly more often with educational materials than did either the handicapped children in the special classroom (SPEC) or the normal children in the mainstreamed classroom (NI). To address the question of the overall impact of mainstreaming on the frequency of social interactions we can examine the total proportion of interactions directed toward children. The handicapped children in the mainstreamed classroom and those in special settings decreased the frequency of their social encounters with peers relative to the increase in frequency in the normal children in the mainstreamed settings (NI). At the end of the year, the handicapped children (MAIN) were in fact interacting significantly less frequently with peers than were their normal classmates. An examination of the frequency of each group's interactions with teachers indicates that in the integrated setting the handicapped children (MAIN) displayed a significant increase in interactions directed toward the teacher relative to the decrease in their normal peers (NI) in the same setting. Handicapped children in mainstreamed and special settings did display signficantly more interactions with the teacher than did

DIRECTION

Differences in Proportion Among Groups







the normal children in the mainstreamed group at Data Collection II.

Frequency of interactions is only one portion of the picture. The QUALITY of these interactions must also be examined. Focusing on social

Insert Figure 2: Social Intensity here p. 14

interactions, we find that the handicapped children in both mainstreamed and specialized classrooms exhibited similar patterns of change in terms of the Intensity of involvement or the energy they used in initiating and maintaining social interactions with no significant differences in the rate of decrease at the lower level or increase at the upper level. When comparing handicapped children in the mainstreamed classroom to their normal peers - "models", at the end of the year, Data Collection II, in terms of the Intensity they displayed in entering social encounters, one finds that handicapped children had significantly more interactions at lower levels and significantly fewer interactions coded at the higher levels than did the normal children in the mainstreamed setting.

The next aspect of social interaction to be considered is that of Reciprocity, the extent or depth of the child's involvement in on-going

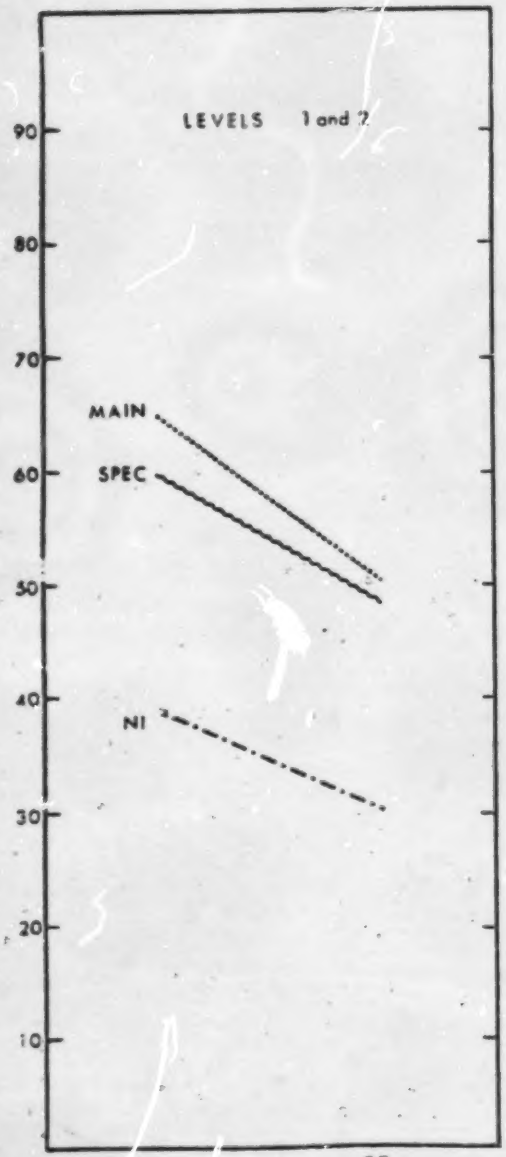
Insert Figure 3: SOCIAL RECIPROCITY here P. 15

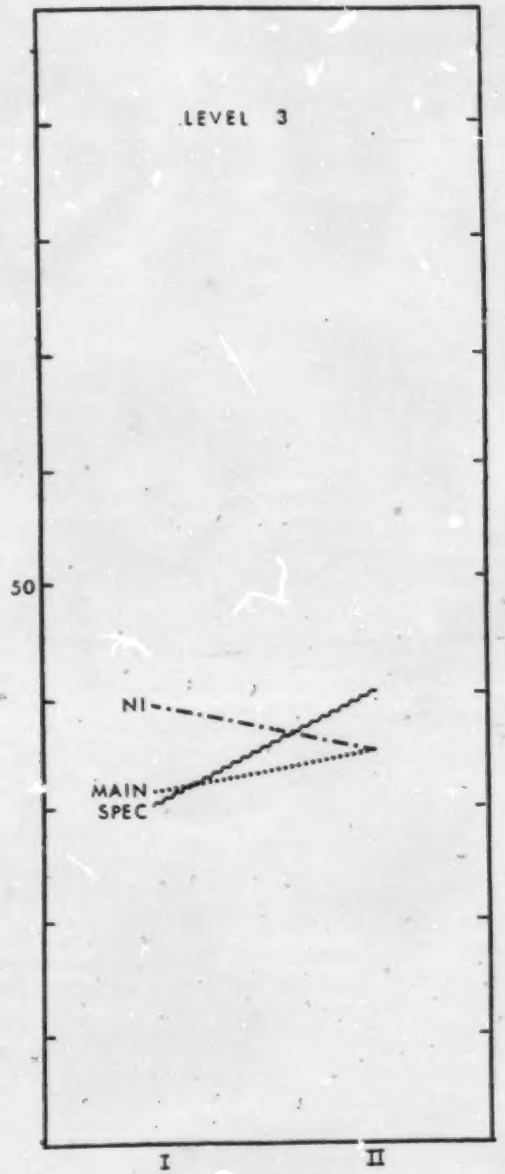
interactions. The only significant differences in this domain were at the more complex levels of Social Reciprocity (Levels 4 and 5). While none of the groups had more than 10% of their interactions coded at the higher levels at the beginning of the year, 25% of the social interactions of normal children in mainstreamed classrooms represented extended reciprocal interchanges between and among children, while only 11% of the interactions of the handicapped mainstreamed children (MAIN) were at the higher level.

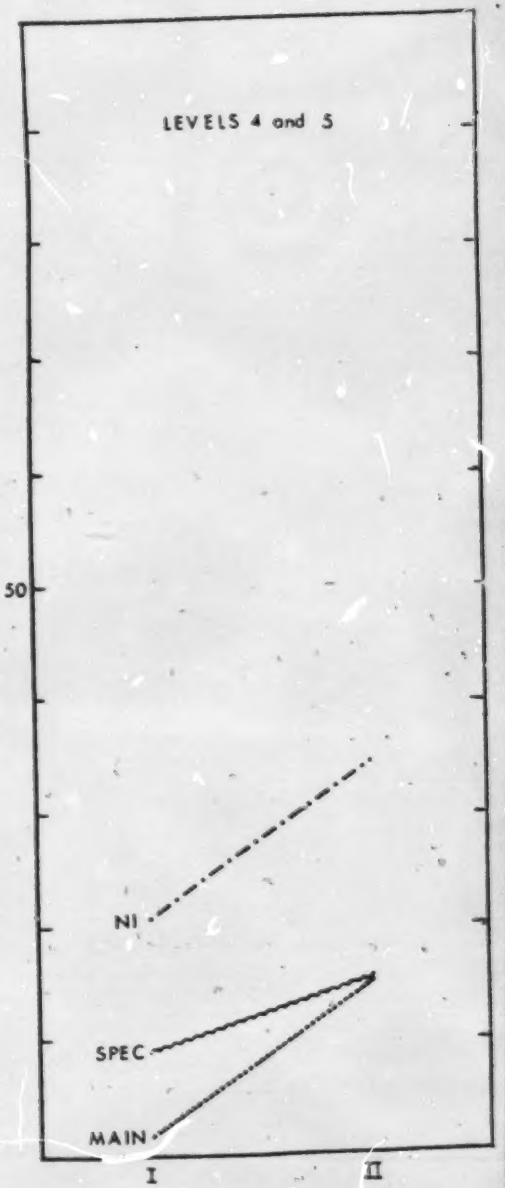
Differences among groups with respect to their interest and use of educational materials was used as a measure of cognitive change. The interest or initiative children demonstrated in beginning tasks or activity,

SOCIAL INTENSITY

Differences in Proportion Among Groups

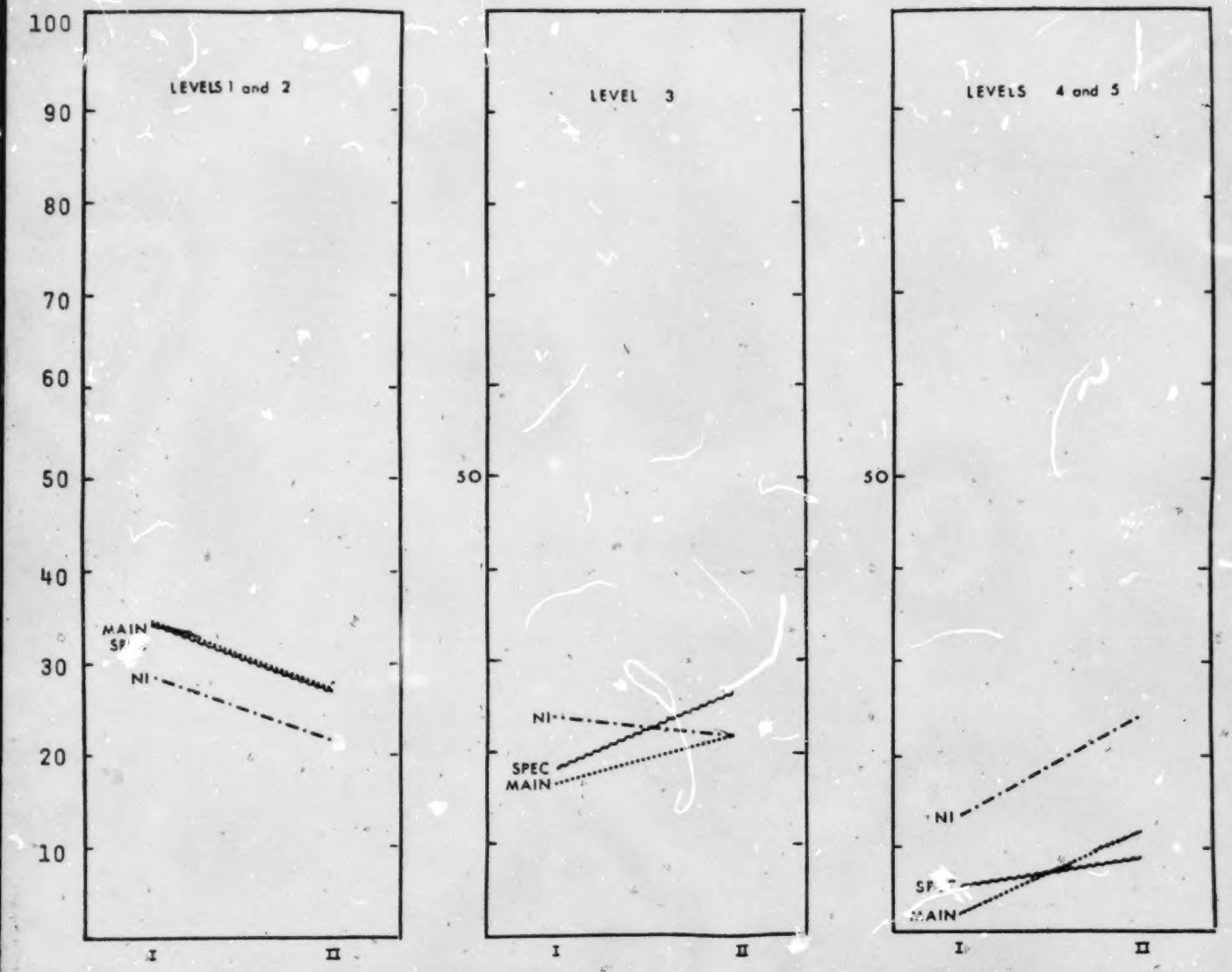






SOCIAL RECIPROCITY

Differences in Proportion Among Groups



Insert Figure 4: MATERIALS INTENSITY here p.17

INTENSITY, showed similar patterns of change across groups. That is, all groups decreased in the proportion of involvements reflecting little interest and all groups increased at Levels 4 and 5 which indicated extended involvement in educational tasks. In the second period of data collection, the interest which handicapped children (MAIN and SPEC) displayed in using educational materials was significantly more often at a moderate level (Level 3) than those of the normal children in the mainstreamed classrooms (MAIN 29% > NI, 17%; SPEC, 28% > NI, 17%). At the level of more extended involvements (Levels 4 and 5 combined) the normal children in the mainstreamed settings (NI) had many more interactions than the handicapped children that were mainstreamed (NI 77%; MAIN 58%) and significantly more than the handicapped children in the special groups (NI 77%; SPED 65%).

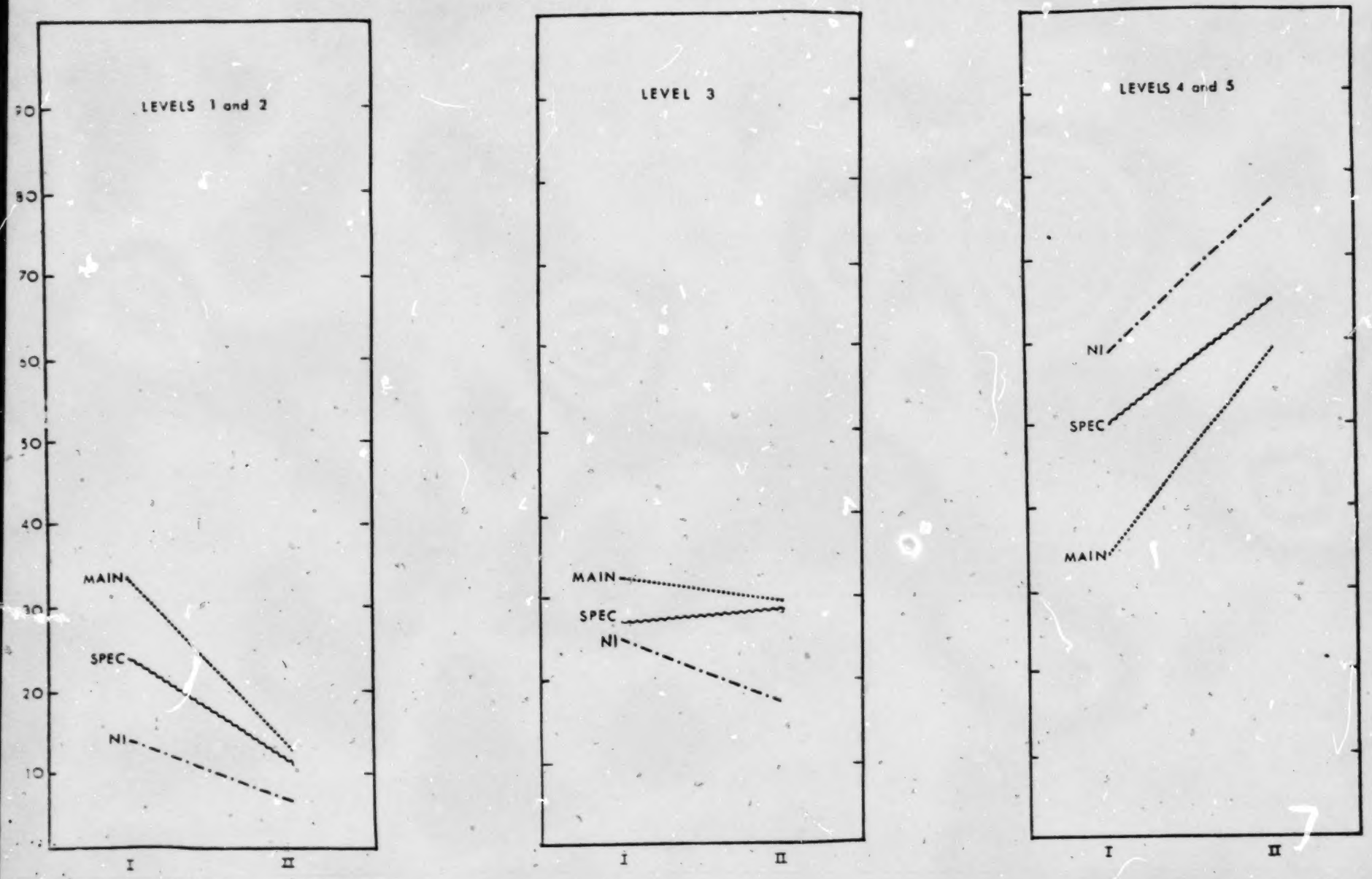
The extent to which children's work reflected awareness of the goal of the task USE indicated more distinctive qualitative differences among groups.

Insert Figure 5: MATERIALS USE here p.18

The handicapped children who were mainstreamed had significantly more interactions with materials coded at Level 3, moderate awareness of the goal of the task than the normal children in the mainstreamed classrooms (MAIN 40% > NI 27%). At the highest level of use (Levels 4 and 5, indicating that the child completes the task or even extend the use of materials creatively or ingeniously), we find that within the mainstreamed classrooms the normal children used materials through to completion significantly more often than did the handicapped children. One should keep in mind that these mainstreamed handicapped children had significantly more interactions with materials (40%) than did the normal children (31%). The handicapped children in the specialized settings (SPEC) also had significantly more

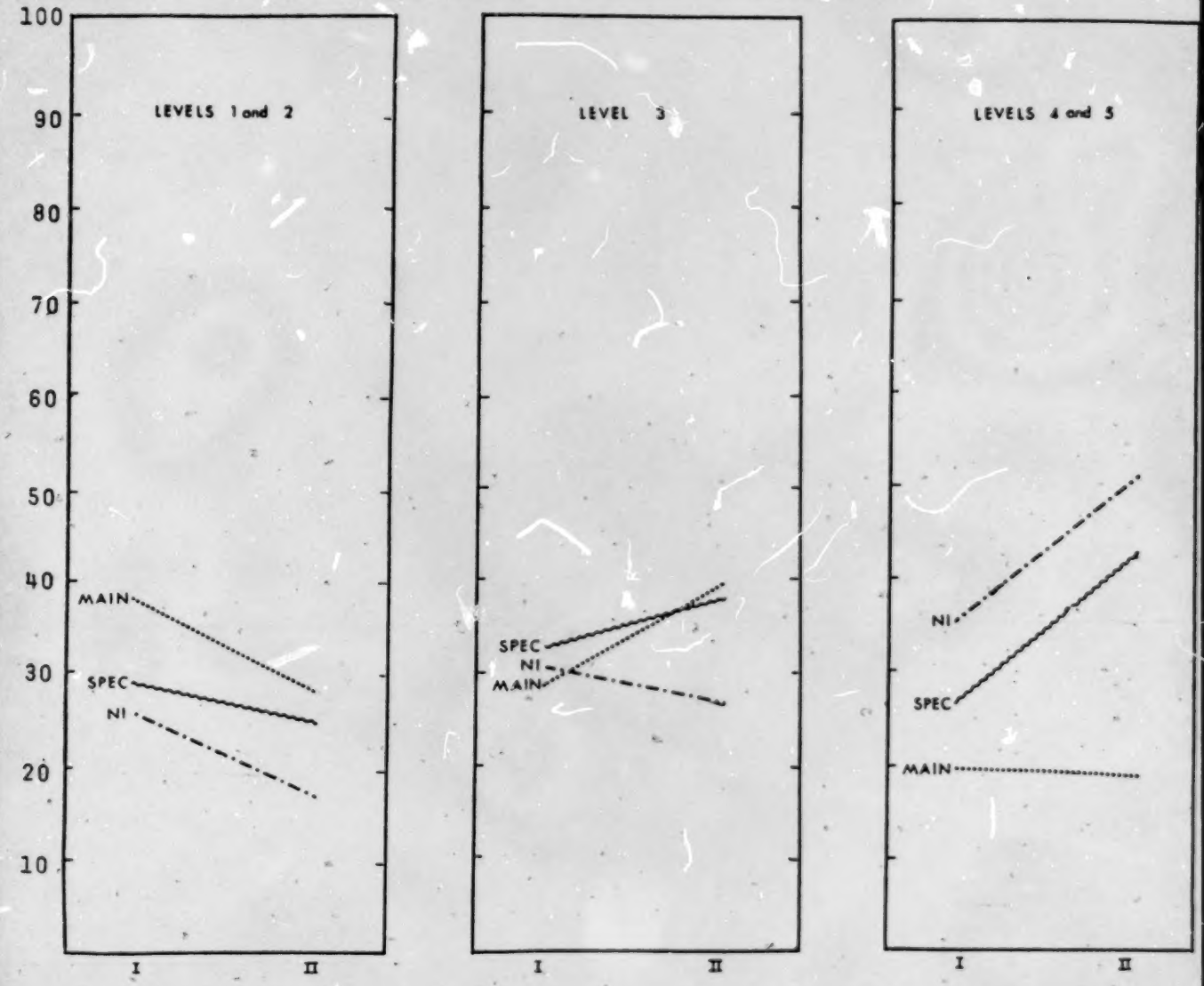
MATERIALS INTENSITY

Differences in Proportion Among Groups



MATERIAL USE

Differences in Proportion Among Groups



interaction reflecting the ability to carry tasks through to completion than did the mainstreamed handicapped children.

SUMMARY OF IMPLICATIONS

In summary, the major accomplishments of this pilot study were: 1) The development of an observational system which was reliable and yielded consistent profiles of children when 2 observers simultaneously recorded. 2) The development of a coding system which was a) reliable in that it yielded consistency among coders categorizing the interaction of both normal and handicapped children with both people and educational materials and b) valid in that it was able to differentiate between normal and handicapped preschool children on the basis of their interaction with people and with educational materials. 3) Indications that mainstreaming cannot be assessed solely in terms of the frequency of interactions to children, teachers or materials alone. Our findings indicated that: a) When examining social interaction, the two groups of handicapped children (MAIN and SPEC) did not differ significantly in either the proportion of interactions directed toward children or the Quality of the Intensity or Reciprocity of these interactions. Focusing on the mainstreamed classrooms, the findings indicate that the normal children interacted significantly more often with other children than did the handicapped children who were mainstreamed. These normal children also had significantly more interaction representing sustained reciprocal interactions, than did the handicapped children who were mainstreamed. b) When examining interactions indicating the cognitive benefits of mainstreamed versus specialized settings for the handicapped children, the child's work with materials, we find that the handicapped children who were mainstreamed had significantly more interactions with materials than did those in the specialized setting. In analyzing the quality of these interactions, however, we find that handicapped children who were in the specialized settings had

significantly more interactions indicating completion and extension of the materials being used than did handicapped children in the mainstreamed classrooms.

On the basis of these findings, we questioned the benefit of mainstreaming for the pre-school-age handicapped children. As the results of this pilot study indicate, we did not see the expected development of increased social abilities as a result of mainstreaming. We also found that in terms of cognitive benefits of the various settings, the handicapped children appeared to work more successfully in the specialized setting.

Notes

1. This research was undertaken from 1976 to 1978 under a grant from the Agency for Children, Youth and Families of the Office of Education of the Department of Health Education and Welfare.

2. Copies of the Final Report, Rehabilitation Monograph #58: Pilot Study of the Impact of Mainstreaming, can be obtained from: The Publications Office, Institute of Rehabilitation Medicine, New York University Medical Center, 400 East 34th Street, New York, N.Y. 10016. Payment of $6.00 check or money order should be made payable to New York University Medical Center.

3. The following information is also available on our previous research and on our on-going programs by writing to: Professor Ronnie Gordon, Director, Preschool and Infant Developmental Programs, N.Y.U. Medical Center, 400 E. 34th Street, New York, New York 10016:-

   Programs Developed in a Rehabilitation Center to Educate and Study Multi-Handicapped Young Children: State of The Art 1976

   Special Needs of Multi-Handicapped Children Under Six and Their Families: One Opinion

   Performance of Neurologically Impaired Preschool Children with Educational Materials

   Observing and Recording Young Children's Behavior: A Comparison Among Observational Methodologies

   Special Children/Special Needs: Film Brochure

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Sample Observation: Handicapped Child in Mainstreamed Setting

School A
Observer: HW
Child: Joseph

Observation #4
5/1/78

Joseph is in the dramatic play area. He's been playing with Pat. Gerard and Keith are nearby. Joseph is now climbing into a cradle, saying, "That one. That one", pointing to a blanket Pat should put on him. She picks up the blanket he has pointed to. Pat puts the blanket over him; he's laughing. She's rocking him back and forth and they're still laughing. He's rocking himself in the bed just a little more vigorously now. Sue (the teacher) says, "Be careful, Joseph." He sits up and smiles brightly at her when she says this. He picks up a toy telephone and with a smile on his face pretends to talk to Pat, saying something ending in "Alright". Pat's smiling back at him; she seems to be very involved in dramatic play with him. Pat gets into a baby carriage, Joseph grabs the carriage Pat's in and says, in a dramatic-play tone, as if he's her daddy, "Come back! Come back!" Pat's laughing at him, looking mischievously, as if she's sneaking away. He gets up and walks to the toy stove, where he picks up a toy vegetable from the top of the stove and pretends to be eating it. Pat now gets into the cradle that Joseph was in before. Joseph is sitting on a chair, smiling at her; she's smiling back. Sue says, in an annoyed tone of voice, "Joseph, be careful, O.K.?!" Joseph just looks at her intently and seriously, as if he's wondering why she's telling him that when he's not getting into any mischief or doing anything dangerous. He sits down in the doll carriage. Now Pat walks over and is rolling him in the carriage gently and he reaches over and takes Pat's hand softly,

DEMOGRAPHIC DATA: YEAR I

GROUP	No.	SEX		C.A.		M.A.		ETHNICITY				SES		
		M	F	$\bar{x}$	SD	$\bar{x}$	SD	Blk.	Wh.	Hisp.	Other	Low/P.A.	Middle	High
Handicapped	16	8	8	4-7 (55.2 mo.)	14.10	2-10 (33.8 mo.)	14.11	56%	19%	25%	0	75%	25%	0
Non-Handicapped	24	14	10	4-4	8.22	5-2	11.40	46%	38%	4%	13%	42%	58%	0

CODING SYSTEM

I. SOURCE -- the impetus for the child's actions (categories are non-hierarchical)

. Self-Generated - self motivated (for initiation of task each additional component of the task is ongoing)

. Ongoing - continues without interruption including all interactions with a group of children

. Returning - resumes activity or interaction after brief interruption

. Reactive - responding to event in the environment

. Elicited - responding to implicit or explicit request

II. DIRECTION -- the person or object to whom or to which the behavior is directed (categories are nonhierarchical)

. Materials	. Children	. Adults
educational materials	child	teacher
educational equipment	handicapped child	observer
	group	other adult

III. MODE -- the modality in which the child interacts (categories are non-hierarchical)

. Vocalizations

verbal
play noise/singing
affect

. Nonverbal

gestural
facial expressions

. Visual

. Motoric

. Sensory/Tactile

. Auditory

. None

IV. Quality -- the intensity and type of involvement in an interaction. Divided into those relating to SOCIAL INTERACTIONS and those related to MATERIALS. Levels within each of the four categories are hierarchically ordered.

A. SOCIAL --

Social Intensity:

1. No interest
2. Minimal involvement
3. Moderate degree of initiative
4. Extended effort or initiative
5. Persistent, assertive, elaborated involvement

Social Reciprocity:

1. None
2. Passive, limited responsiveness
3. Balanced, polite interchange
4. Coor[illegible]ive, ongoing communication, conversation
5. C[illegible]rned, responsive interchange indicating comaraderie

B. MATERIALS --

Materials Intensity:

1. No interest
2. Minimal or limited involvement
3. Moderate or average involvement
4. Extended interest
5. Heightened interest

Materials Use:

1. None
2. Minimal awareness of goal
3. Working toward goal
4. Awareness of task demands and completing task
5. Creative, imaginative use

School A
Observer: HW
Child: Joseph

Observation #4
5/1/78

Joseph is in the dramatic play area. He's been playing with Pat. Gerard and Keith are nearby. (1A Joseph is now climbing into a cradle, B saying, "That one. That one", pointing to a blanket Pat should put on him. She picks up the blanket he has pointed to.) (2 Pat puts the blanket over him; he's laughing.) (3 She's rocking him back and forth and they're still laughing.) (4 He's rocking himself in the bed just a little more vigorously now.) (5 Sue (the teacher) says, "Be careful, Joseph." He sits up and smiles brightly at her when she says this.) (6A He picks up a toy telephone and with a smile on his face pretends B to talk to Pat, saying something ending in "Alright". Pat's smiling back at him; she seems to be very involved in dramatic play with him.) Pat gets into a baby carriage. (7 Joseph grabs the carriage Pat's in and says, in a dramatic-play tone, as if he's her daddy, "Come back! Come back!" Pat's laughing at him, looking mischievously, as if she's sneaking away.)

CHILD Joseph DATE 5/1/78 OBSERVER HW CODER HW DATE 6/8/78
CENTER School A

UNIT #	I. SOURCE	II. DIRECTION	III. MODE(S)	IV QUALITY: Social Intensity	Social Recip.	Materials Intensity	Materials Use
1.	A self-gen.	material	motoric			3	3
	B self-gen	child	verbal/gestural	3	3		
2.	ongoing	child	affect	4	4		
3.	ongoing	child	affect	4	4		
4.	ongoing	material	motoric	3		4	4
5.	reactive	teacher	facial exp.	3	3		
6.	A sg	material	verbal			4	4
	B return	child	facial exp./verbal	4	4		
7.	ongoing	child	verbal	5	5		

DEMOGRAPHIC DATA: YEAR II

Group	No.	SEX		C.A.		M.A.		ETHNICITY				SES		
		M	F	$\bar{X}$	SD	$\bar{X}$	SD	Blk.	Wh.	Hisp.	Other	Low/P.A.	Middle	High
NORM	9	4	5	4-9	3.21	5-8	7-16	22%	33%	11%	33%	67%	33%	0%
SPEC	7	6	1	4-6	9.88	3-0	14.67	0%	29%	71%	0%	43%	57%	0%
MAIN	6	4	2	4-0	5.73	3-8	16.44	17%	33%	50%	0%	50%	50%	0%
NI	10	6	4	3-10	9.02	4-5	10.26	40%	30%	10%	20%*	50%	50%	0%

*predominantly Oriental